should not employ that method of treatment if he knew that the fluid in the chest were purulent, though in one case, where the fluid turned out to be pus, he had drawn off a pint of it in six hours. As to the vocal sounds, there were vocal vibrations heard over the upper part of the lung, and ægophony was audible before and after the operation. No vocal vibrations were heard at the base of the lung; but there was dulness at the base even when the patient left the hospital. He had remained at work since then until now, with a small fistulous opening in the side, which still discharged a small quantity of fluid. He felt occasionally a little troubled; then a kind of boil would appear at the fistulous opening; this would open and discharge a little clear fluid, and the patient again became better. Usually there was not much chance of a fistulous opening resulting from this operation.

The Detection of Pyloric Insufficiency.

A method of diagnosing alterations in the structure of the pyloric orifice of the stomach, which render it incapable of complete closure, is described by Professor EBSTEIN, of Göttingen, in No. 155 of Volkmann's *Sammlung Klinischer Vorträge*.[1] The method is not new in principle but new in its diagnostic application, and it consists in artificially distending the stomach with carbonic acid gas. If the pylorus is able to contract naturally, this gas simply renders the contours of the stomach clearly visible through the abdominal wall, while on percussion a markedly tympanitic note is produced over the whole area of the stomach, which clearly defines it from the neighbouring intestinal tract. Supposing, however, the pylorus is incapable of complete closure, almost immediately after the stomach becomes dilated, the gas makes its way into the duodenum and thence into the bowel, giving rise to acute tympanites. The latter varies in degree in various sections of the intestine, while the distension of the gastric walls remains but slight, so that it is not always possible to mark out the stomach, either by inspection or percussion. Gaseous distension has been used by Dr. S. Fenwick in England, and by Frerichs and Heinrich Wagner in Germany, with the view of determining the boundaries of the stomach, but Professor Ebstein appears to be the first who has utilized it for the purpose above mentioned. Opinions have been rather divided as to the normal condition of pyloric contraction during digestion, and Professor Ebstein has himself undertaken some interesting experiments on animals, with a view to acquire some accurate knowledge on the subject. Four dogs and a cat were experimented on, and all the animals were narcotized and killed at the end of the experiment by the injection of chloroform into the trachea. The plan adopted was as follows: In three cases a solution of tartaric acid and then one of bicarbonate of soda was introduced into the stomach, and the upper end of the catheter was closed by a clamp. In the two others pure carbonic acid was forced into the stomach by the pressure of a short column of water. In all the cases one arm of a bent glass tube was tied into the commencement of the small intestine, and the other carried to the bottom of a vessel containing baryta water. In no case did the least cloudiness occur in this reagent so as to indicate the passage of any trace of gas through the pylorus. Care was also taken to make certain that there was no abrupt bend in the intestine to confine the gas, and that the duodenal catheter was quite permeable. The contraction of the pyloric muscles continued even until after death. In one case an incision through the longitudinal and circular fibres of the pylorus was made while the animal still lived, and it was not till the innermost circular fibres were divided that the stomach collapsed and the gas escaped. Professor Ebstein refrains from drawing too strict a conclusion as to the contraction of the pylorus in man from these experiments on the lower animals, but such clinical observations as he has as yet collected are all in favour of the view that a healthy human pylorus is able to prevent all escape of gas into the duodenum. In examining a patient by this method a teaspoonful of tartaric acid is given in a little lukewarm water, and this is immediately followed by a large teaspoonful of bicarbonate of soda similarly dissolved. In two cases of cancer of the stomach (and it is mainly with this affection that the symptom of pyloric insufficiency is combined), the diagnosis made *intra vitam* by this method was completely confirmed. In one case the cancerous mass gave rise to a semicircular chink large enough to allow the forefinger to pass through it; and in the other a large ulcer, which extended deep into the left lobe of the liver, had destroyed as much of the pyloric ring as would admit two fingers. In five out of six other cases of pyloric insufficiency, without necropsy, the other clinical signs enabled an almost certain diagnosis of cancer of the stomach to be made. In the sixth case there were strong grounds for a similar diagnosis, as neither ulcer of the stomach nor any other organic changes, which in the absence of cancer would explain the great emaciation, vomiting, and severe dyspeptic symptoms, could be detected. Professor Ebstein, however, distinctly admits that the existence of incomplete closure of the pylorus is not necessarily connected with cancerous changes, or that we are as yet able to draw from this symptom an accurate conclusion as to the form of disease. A simple ulcer may impair the function of the pyloric muscles, and very probably pyloric insufficiency may, in some cases, have a nervous origin; for example, in hysteria, where the tympanites of the intestine can be explained by the immediate passage of the air which such patients swallow, from the stomach into the bowel. The majority of cases will, however, probably be cancerous; and further, if in a given instance the diagnosis of cancer of the stomach can be definitely made, and the carbonic acid test reveals pyloric insufficiency, Professor Ebstein believes (and probably no greater authority on cancer of the stomach exists) that even if vomiting is absent the seat of the disease may, with great probability, be assigned to the pylorus. In conclusion, he points out that this method, assisted by careful post-mortem examination of the pyloric region, may help to clear up some of the obscurer symptoms of diseases of the stomach. It may be used without fear either of distressing the patient or of enlightening him as to the character of his malady.

---

[1] "Ueber die Nichtschlussfähigkeit des Pylorus (*Incontinentia Pylori*)."

Thus says Professor Ebstein: but we have some hesitation in accepting this dictum. The intense and overpowering distress sometimes occasioned by overdistension of the stomach with air or gas of any kind is unfortunately too well known to many. Not only are the movements of the diaphragm and that of respiration interfered with, but the movements of the heart, both directly and through the cœliac plexus, are also impeded. Such a degree of oppression is thus produced, that it is not an uncommon factor in the immediate cause of death in certain forms of disease.—*Med. Times and Gaz.*, Feb. 1, 1879.

Citrate of Caffein as a Diuretic in Cardiac Dropsy.

Prof. Gubler has drawn attention to the special property of citrate of caffein of inducing abundant and instantaneous diuresis in cases of cardiac dropsy. Dr. LEWIS SHAPLER (*Practitioner*, Jan. 1879) has confirmed this observation, and finds that the caffein, in doses of from gr. iij to gr. vj, is a diuretic and cardiac stimulant of great value in such cases of cardiac dropsy where a dilated, feeble, and irregularly contracting heart undergoing progressive mural decay is the main clinical and pathological element to be contended against.